TWIN VELOCITY PLUS FOR ROAD STAR 9852

FITS: '99-UP ROAD STAR 1600 AND 1700 (EX. WARRIOR)

PART #		INCLUDED
500161	1	Chrome Twin Velocity Plus
909852	1	Mounting Kit Including:
	1	M6 Serrated Flange Nut
	2	M6–1.0mm x 16mm Socket Head Cap Screw
	2	M6–1.0mm x 30mm Socket Head Cap Screw
	3	M6 Tapered Bolt Caps
	3	1/4"–20 Nylock Nut
	3	1/4"–20 x 5/8" Socket Head Cap Screw — Patched
	4	M4–.7mm x 10mm Socket Head Cap Screw
	4	Spacer — Black Nylon
	2	5/16"–18 x 1" Button Socket Cap Screw — Stainless
	2	5/16"–18 Low Crown Acorn Nut — Chrome
	2	5/16" Split Lock Washer — Zinc
	2	Reducer Washer
	4	Oval Foam Pad
	1	Lower Mounting Bracket
	1	"Z" Bracket
	1	"L" Bracket
	1	Idle Adjuster Bracket
	1	Main Support Bracket
	1	Rubber Intake Duct
	1	Barbed Connector, 3/8"
909420JK	1	Jet Kit Including:
	1	.020" Shim
	1	#205 Main Jet
	1	1.5 Air Bleed
	1	#175 Main Jet
	1	#182.5 Main Jet
	1	#185 Main Jet
	1	#187.5 Main Jet
	1	1.3 Air Bleed
	1	37.5 Pilot Jet
	1	1158j-72W Jet Needle with Clips
608498	1	Round cage and filter assembly
400543	1	Hyper Filter, Oddball Triangle
309852	1	Installation Instruction

Please read and understand entire instructions before starting installation.

THANK YOU FOR CHOOSING KURYAKYN!

PLEASE NOTE

It is the installers' responsibility to make sure all fasteners (including pre-assembled) are tightened before operation of motorcycle. Küryakyn will not warranty components that are lost due to improper installation. Periodic maintenance may be required.

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CUSTOMER SERVICE

877.370.3604 (toll free)

INSTALLATION QUESTIONS

techsupport@kuryakyn.com
or call 715.247.2983

LIMITED WARRANTY

Küryakyn warrants that any Küryakyn products sold hereunder, shall be free of defects in materials and workmanship for a period of one (1) year from the date of purchase by the consumer excepting the following provisions:

· Küryakyn shall have no obligation in the event the customer is unable to provide a receipt showing the date the customer purchased the product(s).

· The product must be properly installed, maintained and operated under normal conditions.

· Küryakyn makes no warranty, expressed or implied, with respect to any gold plated products.

· Küryakyn shall not be liable for any consequential and incidental damages, including labor and paint, resulting from failure of a Küryakyn product, failure to deliver, delay in delivery, delivery in nonconforming condition, or for any breech of contract or duty between Küryakyn and a customer.

· Küryakyn products are often intended for use in specific applications. Küryakyn makes no warranty if a Küryakyn product is used in applications other than intended.

· Küryakyn electrical products are warranted for one (1) year from the date of purchase by the consumer. Components of Küryakyn products containing L.E.D.s will be warranted for defects in materials and workmanship for 3 years from the date of purchase.

· Küryakyn makes no warranty of any kind in regard to other manufacturer's products distributed by Küryakyn. Küryakyn will pass on all warranties made by the manufacturer and where possible, will expedite the claim on behalf of the customer, but ultimately, responsibility for disposition of the warranty claim lies with the manufacturer.

ABOUT OUR CATALOG

You'll find all our innovations for H-D, GL and Metric Cruisers in our annual catalogs. Order online today–select the "CATALOGS" icon. Each Küryakyn™ product comes with a Proof-of-Purchase good for a complimentary catalog. Details in packaging.

Be sure to ask your local dealer about other Küryakyn products, the motorcycle parts and accessories designed for riders by riders.

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DISCLAIMER - PLEASE READ BEFORE PROCEEDING:

Any modifications to a motorcycle's exhaust or intake tract require carburetor re-jetting to achieve maximum performance and maintain drivability. If you are uncomfortable with the process of tuning your carburetor, we recommend that you bring your motorcycle to a qualified motorcycle mechanic to have this kit installed. If you choose to attempt this procedure yourself, refer to the carburetor removal, disassembly, reassembly and installation procedures outlined in your Road Star service manual. The jets included in this kit were selected based on test results with various combinations of components that we felt would represent the majority of the customers purchasing this kit (see Addendum I). However, no two motorcycles are exactly alike. Depending on the individual case, additional jets may need to be purchased from an outside source. Küryakyn warrants the parts included in this kit to be free of defects in materials and workmanship, but makes no claim whatsoever in regard to costs associated with installation or tuning.

PIC.1

TOOLS SUGGESTED

Standard and Metric hex keys, 7/16" wrench, 1/2" wrench, 1/4" 12 pt. wrench or socket with ratchet, 12mm wrench, 10mm wrench, 10mm socket and ratchet, #1 Phillips screwdriver, and a factory service manual for exact year and model in question.

PROCEDURE

STEP 1 Remove the seat, fuel tank, and OEM air cleaner assembly. Disconnect the hoses connected to the air cleaner while leaving them connected to the motorcycle. Save the clamp that secures the air duct to the carburetor and the OEM fasteners used to secure the stock air cleaner assembly to the motorcycle as some will be reused.

STEP 2 Remove the carburetor according to the section in your Road Star factory service manual that outlines procedures for carburetor removal, disassembly, reassembly and installation.

Now is a good time to proceed with re-jetting the carburetor. We have supplied jets to cover many common configurations. For jet locations and jetting recommendations with various exhaust combinations see Addendum I. Since the OEM screws retaining the float bowl are easily damaged, we have included replacement M4 socket head cap screws to replace them, if necessary.

STEP 3 Insert the rubber intake duct into the main support bracket as shown in PIC.1. The rubber nipple should be pointing toward the longest leg of the bracket.

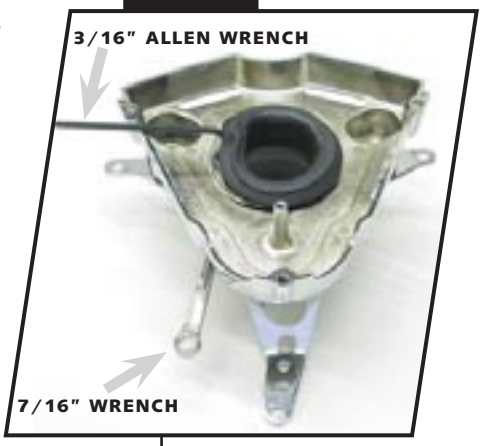
STEP 4 With a 12 pt. 1/4" wrench or socket, remove the three screws securing the rear half of the air cleaner to the front and separate the halves. It is not necessary to remove the five screws securing the access cover! Remove the screw securing the inner plate then remove the inner plate and filter element.

STEP 5 Insert the rubber intake duct into the back of the Twin Velocity Plus. See PIC.2. You may need to use a screwdriver to help "poke" the flange of the rubber intake duct into position. When in place, the rubber flange will be "sandwiched" between the support bracket and the back of the Twin Velocity Plus.

PIC.2

RUBBER INTAKE DUCT PULLED THROUGH THE BACK OF TWIN VELOCITY

PIC.3



STEP 6 Line up the three holes in the back of the Twin Velocity Plus and the three holes in the flange of the rubber intake duct with the three holes in the main support bracket. Insert the three supplied 1/4"–20 X 5/8" socket head cap screws from inside the Twin Velocity Plus and secure on the back side of the main support bracket with the 1/4"–20 thin nylock nuts. You will need to pull back the inner flange of the rubber intake duct to access the holes. Hold the nylock nuts with a 7/16" wrench as you tighten the socket head cap screws with a 3/16" hex key. See PIC.3.

PAGE 2

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STEP 7 Fasten the oval mounting bosses on the back of the Twin Velocity Plus to the main mounting bracket. Insert two black nylon spacers between the bracket and air cleaner then insert a 5/16"–18 x 1" button head cap screw with a reducer washer from inside and secure behind the bracket with a split lock washer and 5/16"–18 acorn nut. See PIC.4.

STEP 8 Push two oval foam pads into each oval pocket, completely filling them. See PIC.5. Reinstall the filter element and inner plate. Install the round filter into the hole in the center of the inner plate. See PIC.6. Install the outer cover and secure with fasteners.

STEP 9 Place the OEM clamp removed in STEP 1 on the end of the rubber intake duct in the same manner it was installed on the OEM air duct.

STEP 10 Loosely install the "Z" Bracket to the rear cylinder head and the "L" bracket to the front cylinder head using the supplied M6 X 1.0 X 30mm socket head cap screws. See PIC.7. Their position may need to be adjusted slightly when the air cleaner is installed so do not tighten them fully at this time.

STEP 11 Install the chrome lower support bracket as shown in PIC.8 using the OEM hardware. If necessary, tweak the bracket upward slightly so it does not contact the engine case.

STEP 12 Hold the Twin Velocity Plus and support bracket assembly up to the bike.
- Slip the rubber intake duct with the OEM clamp onto the carburetor.

- Loosely fasten at the top two legs of the "Y" bracket to the "Z" and "L" brackets. Use the supplied M6 X 1.0 X 16mm Socket Head Cap Screws and the supplied Tapered Bolt Caps as seen in PIC.9.

- Loosely fasten the lower leg of the "Y" bracket and idle speed adjuster using the supplied Tapered Bolt Cap and the M6 serrated nut with the OEM fastener. See PIC.10.

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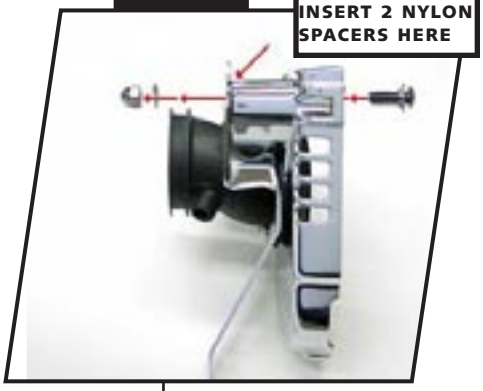
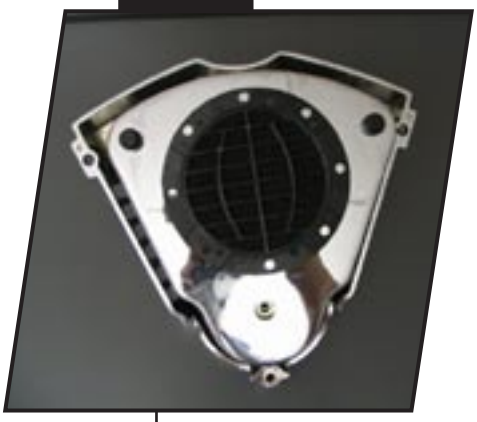
PIC.4

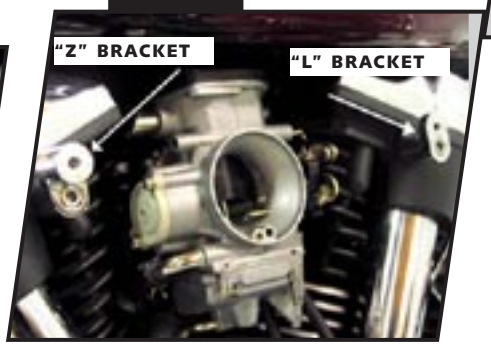


PIC.5

PIC.6



PIC.7



PIC.8

PIC.9

PIC.10

STEP 13 Once all fasteners are in place, fully tighten the lower leg of the main mounting bracket, the two fasteners that hold the "Z" and "L" brackets to the cylinder heads, and the two fasteners that hold the main mounting bracket to the "Z" and "L" brackets. Tighten the OEM clamp securing the rubber intake duct to the carburetor.

NOTE To tighten the "L" bracket to the front cylinder head, it may be necessary to momentarily remove the main mounting bracket from the "L" bracket to allow access to the M6 x 1.0 x 30mm socket head cap screw securing the "L" bracket to the head.

STEP 14 The 3/8" I.D. hose is your crankcase breather hose. Insert one end of the 3/8" barbed connector into this hose and then plug it into the large rubber nipple on the bottom of the rubber intake duct. The float bowl vent hose from the carburetor can be neatly tucked under the tank or removed from the carburetor altogether.

STEP 15 Reinstall fuel tank and seat.

ADDENDUM I

The jets included in this kit were selected based on test results with various combinations of components that we felt would represent the majority of the customers purchasing this kit. However, no two motorcycles are exactly alike. Depending on the individual case, additional jets may need to be purchased from an outside source. The following recommendations are intended as a starting point and should work well in the majority of cases. Individual bikes may need additional tuning to achieve maximum performance. If the exact combination is not listed, choose the listing that most closely resembles the configuration of the motorcycle. These baselines were established at 700 feet above sea level.

SETTING THE PILOT MIXTURE SCREW

While the carburetor is removed for re-jetting, remove the pressed-in plug covering the pilot mixture screw and as a starting point, set the PMS two turns out from lightly bottomed.

Once the bike is completely reassembled, start it and allow the engine to reach normal operating temperature. The engine should idle on its own without the enrichener. Search for the highest idle speed by slowly turning the PMS inward and outward; there will be a small range where idle speed is maximized. Once the highest idle speed has been located, turn the PMS inward ever so slowly until the idle begins to drop then back it out just enough to make the idle speed pick back up. You have now located the ideal PMS setting.

ROAD STAR 1700

ROAD STAR 1700 WITH TWIN VELOCITY PLUS AND STOCK EXHAUST:

Main Jet	185
Needle	1158j-72W (clip in 4th groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

ROAD STAR 1700 WITH TWIN VELOCITY PLUS AND COBRA SLIP-ON MUFFLERS:

Main Jet	175
Needle	1158j-72W (clip in 3rd groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

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ROAD STAR 1700 WITH TWIN VELOCITY PLUS AND HARD KHROME STAGGERED STRAIGHTS:

Main Jet	182.5
Needle	1158j-72W (clip in 2nd groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

ROAD STAR 1700 WITH TWIN VELOCITY PLUS AND COBRA LO-BOYS STAGGERED DUALS:

Main Jet	182.5
Needle	1158j-72W (clip in 2nd groove)
Pilot Air Bleed	1.3
Pilot Jet	37.5

ROAD STAR 1600

(These items are in a separate, small poly bag inside the jet kit)

Main Jet	205
Needle	Add one .020" shim to raise needle
Pilot Air Bleed	1.5

Ride On!

FIG.1